

The interview granted by Examiner Prieto and Primary Examiner Luu, with inventor Dr. Motoyama, on November 5, 1999 is hereby gratefully acknowledged. During the course of this interview it was pointed out that the transmission of Internet electronic mail is handled at the application level, while messages of other art are handled at lower levels, such as the transport level and the network level. Prior to the interview, Examiner Luu had objected to the recitation of "connectionless" mode of communication because a connectionless mode can occur at the IP level, the Transport (TCP) level or at the Application level. Examiner Luu agreed that Internet electronic mail is handled at the application layer. Examiner Luu's facsimile communication of February 14, 2000 is also gratefully acknowledged.

Applicant's arguments as presented in the Reply Brief filed on June 7, 1999 and the Appeal Brief filed on February 17, 1999 are hereby incorporated by reference herein.

Before discussing in detail the rejections of the claims, it is believed that a brief recapitulation of the present invention is in order. The present invention is directed towards a method and system for communicating, through Internet electronic mail, between a monitored device and a monitoring device. Figure 7, and page 17, line 3- page 18, line 22 of the specification specifically show and describe the processes for input messages and output messages, which are in the application layer. Claims 10, 12-14, 16-17, 19, 36, 38, 40, 42, and 52-61 have been amended to clarify that information is transmitted between the monitoring device and the monitored device through Internet electronic mail, wherein the information is contained in an Internet electronic mail message.

The monitored device is generically recited in the independent claims but the specific implementation recited in the specification, which is not to be used to improperly limit the claims including the independent claims is a business office device as recited in Claims 12

and 38. Specific implementations of the business office device include a copier, a digital copier, a facsimile machine, a scanner, a printer, a facsimile server, or other business office machine. See e.g., page 14, lines 16-20 of the specification, and element 24, 28, and 32 of Figure 1, for example.

Independent Claims 10, 16, 36, and 42 recite the utilization of status information determined using sensors. The specification discloses the use of many different types of sensors found in business office devices (or other devices) and such sensors are described in the specification throughout pages 12-15. It is to be noted that the sensors of the present invention are not limited to the sensors used in a business office machine but may be any type of sensors including the sensors found in "a metering system including a gas, water, or electricity metering system, vending machines, or any other device which performs mechanical operations, has a need to be monitored, and performs a function." See page 14, lines 20-26.

Figure 11 illustrates one of the processes of the invention in which the monitored device transmits information such as density information to the monitoring device. The description of Figure 10 is set forth in the specification at page 20, line 23 - page 22, line 2. Claim 10 specifically recites that the monitoring device requests a status of the monitored device using sensors. This request for status is transmitted through Internet electronic mail. Page 21, line 14 - page 22, line 2 describes how the monitoring device transmits a connectionless-mode of communication and the specification at page 18, lines 8-22 describes how a connectionless-mode of communication may be implemented through Internet e-mail.

Claims 18 and 44 describe the use of a connection-mode of communication when the status information is outside of the normal operating parameters. This feature of the invention is supported by the specification at lines 13-26 of page 19.

Turning now to the Official Action mailed on January 4, 2000, it is respectfully pointed out that:

Applicant's arguments regarding Kraslavsky et al. as being directed to a high speed system for transmitting real-time or near-real-time status information appear to be mischaracterized by the Examiner. On page 3, lines 6-9, the Official Action states, "Obviously, Kraslavsky does not teach improving system speed by connecting the printer on LAN because a computer has a printer connected directly on the computer's parallel port provides the best real-time or near real time for status information compare[d] to printer connected on LAN." Applicant has not stated or implied that Kraslavsky et al. teaches "improving system speed," but has instead pointed out, on page 2, lines 8-12 of Applicant's Reply Brief, filed on June 7, 1999, and on the bottom of Page 5, and on the top of Page 6 of the Appeal Brief, filed on February 17, 1999, that it is evident that the purpose of Kraslavsky et al. is to enable a printer to transmit sufficient amounts of data to a LAN to enable the printer to be an effective and intelligent member of the network. Applicant also pointed out that in Kraslavsky et al. there is a desire to have a high-speed response or a near real-time response when determining status or control information (e.g., see col. 14, lines 37-48; see also col. 16, lines 10-11). Applicant has pointed out that modifying Kraslavsky et al. to operate using Internet electronic mail which may be quite slow would be contrary to the teachings of Kraslavsky et al.

Applicant's arguments regarding the historical transmission of text between human users appears to be mischaracterized by the Official Action. On page 3, line 16 to page 4, line 1 the Official Action states, "Cohn teaches various source and destination message systems that comprise voice mail, electronic mail, facsimile transmission, or video transmission capabilities that can communicate compound message to each others using Internet electronic mail message format." However, the cited portions of Cohn et al. mention electronic mail, but only in the context of a user-to-user transmission of information. On page 7 of the Appeal Brief, Applicant pointed out that there have developed ways to send binary information utilizing text encoding, but there is no prior art of record disclosing Internet electronic mail messages used outside of the context of messages which originate from a user and which are transmitted to a user. Applicant pointed out that Cohn et al. merely disclose an electronic mail message originating from a *user* and terminating at a *user* and neither disclose nor suggest the concept of transmitting information from sensors.

Applicant respectfully points out that, in col. 30, lines 55-67, Cohn et al. disclose a messaging system between people who subscribe to a closed system. The system described separates subscribers from non-subscribers, whereas a general Internet electronic mail system does not distinguish between subscribers and non-subscribers. Also, as recited in Claim 1 of Cohn et al., the user profiles in database storage are critical to the system of Cohn et al. The system updates the user profile among the hubs that use the database for operation, as shown in Figure 10. The availability of the user profile seems to be a critical factor of the system of Cohn et al., whereas Internet electronic mail, in contrast, does not require keeping a user profile. The locations of the sender and destination are likely to be found in the last hierarchy of the DNS server. The DNS information at the lowest level is not replicated among the hubs

in the system as in Cohn et al. Normally, intermediate systems between the sender and the receiver do not have any information about the user nor have any need to store the user profile.

The Official Action states, "it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Internet electronic mail to transmit many different types of information including the type of information which is exchanged in Kraslavsky among various source and destination systems because it would allow any type of messages to be transferred globally between any devices."¹ It is respectfully pointed out that there is no suggestion as to how one would accomplish "global transfer of any type of messages between any devices" using Internet electronic mail by combining the teachings of Kraslavsky et al. and Cohn et al., especially since Cohn et al. teaches transmitting user-to-user electronic mail, and *not* electronic mail "between any devices." Cohn et al. also does not suggest transmitting electronic mail on a near real-time basis, as Kraslavsky et al. would seem to require in order to combine the references. As Applicant has pointed out previously, modifying Kraslavsky et al. to operate using Internet electronic mail (at the application layer) which may be quite slow would be contrary to the teachings of Kraslavsky et al.

On page 4, line 7 to page 5, line 2 the Official Action appears to mischaracterize Applicant's arguments regarding the November 25, 1998 Office Action's statement that it would have been obvious to use the Internet electronic mail message of Cohn et al. in the system of Kraslavsky et al. "because it would allow message [sic messages] to be transferred globally between any devices" (see second paragraph, Office Action mailed on November 25, 1998). Applicant had pointed out that, in this statement, the Examiner appeared to be stating

¹See Official Action, Page 4, lines 2-6.

that because electronic mail messages operate *in accordance with a standard* which is implemented using a variety of hardware and software, the use of Internet electronic mail would provide an advantage to Kraslavsky et al. In response to this apparent assertion on the part of the Examiner, Applicant further pointed out that Kraslavsky et al. already operate in accordance with well-known standards, still further pointing out that Kraslavsky et al. include the use of many different protocols including TCP/IP which already allows for global transfer between devices. The Examiner makes a blanket statement that "Internet electronic mail is TCP/IP standard for electronic mail service and this well known feature is clearly documented by Douglas E. Comer's book," which is further cited. Applicant respectfully points out that neither Applicant nor Kraslavsky et al. mention, suggest, or imply the use of Internet electronic mail in reference to col. 19, lines 1-4 of Kraslavsky et al. At the time the invention was made, one skilled in the art would not have been motivated to combine the teachings of Kraslavsky et al. regarding TCP/IP with, according to the Examiner, the "well known feature" of Internet electronic mail, for the reasons cited on pages 5-12 in the Appeal Brief. Applicant further submits that at the time the invention was made, one skilled in the art would not have been motivated to combine the teachings of Kraslavsky et al. regarding TCP/IP with the feature of Internet electronic mail.

Applicant maintains that the Examiner has shown *no motivation* to modify Kraslavsky et al. to use Internet electronic mail "because it would allow message [sic messages] to be transferred globally between any devices," as stated by the November 25, 1998 Office Action discussed previously. "Because there is no evidence in the record of a suggestion, teaching, or motivation to combine the prior art references asserted against the pending claims, the

obviousness rejections" should be reversed. *In re Dembiczak*, 50 USPQ2d 1614, 1620 (Fed. Cir. April 28, 1999).

As to Applicant's arguments that a reference cannot be modified to destroy its purpose, the Examiner simply references points made in his sections (A) through (C) of the Official Action, and then recites boiler-plate obviousness discussion regarding combining Cohn et al.'s teaching into Kraslavsky et al.'s invention, without further discussion. Please refer to pages 10-12 of the Appeal Brief for details of why the essential features of Kraslavsky et al. are destroyed by the Examiner's suggested modifications.

In the Official Action, on page 5, line 7 through page 6, line 6, the Examiner appears to assert that Internet electronic mail supported by SMTP protocol using TCP connection protocol provides acknowledgments, and is thus a "connection" mode of communication. However, it was demonstrated by Dr. Motoyama in the Examiner Interview on November 5, 1999, and it is well known that Internet electronic mail may be delayed for several days, may be returned to the sender, may be lost if a return address is incorrect, and may not ever be delivered to the intended recipient, and thus is contrary to "connection" oriented communication, which, as defined by the Microsoft Press Computer Dictionary, Third Edition, 1997, page 114 "requires a direct connection between two nodes on one or more networks," while "connectionless" transmission "does not require a direct connection between two nodes on one or more networks. Connectionless communication is achieved by passing, or routing, data packets, each of which contains a source and destination address, through the nodes until the destination is reached."

Kraslavsky et al. teach an interactive system (see, for example, col. 4, lines 3-14). The interactive system is critical to the remote control system of Kraslavsky et al. (see, for

example, col. 21, lines 6-15). It is pointed out that there is no guarantee of interactivity in an electronic mail system, as a sender may send electronic mail out when the receiver is down. Additionally, the system of Kraslavsky et al. only responds to a command from the remote location, and there is no teaching of initiation of transmission of information to the remote location.

One of the requirements for the system of Kraslavsky et al. is the board and remote system to establish the direct connection. An exemplary list of the direct connection requirements is illustrated in FIG. 13, step S1309; FIG. 15, steps S1501, S1502; FIG. 16A, step S1606; FIG. 20, step S2003; FIG. 24, step S2403; and col. 18, lines 17-33 of Kraslavsky et al. Applicant points out that the system employs broadcast as a means to notify existence before establishing the direct communication as shown in FIG. 5B S13, FIG. 14 S1401, FIG. 16A S1603, S1604, FIG. 20 S2001, FIG. 24 S2401. In Internet electronic mail systems, there is no broadcasting to establish the communication between the sender and receiver of the message. TCP/IP may use ARP to get the MAC address. However, it is likely to be the MAC address of an intermediate station instead of the final destination. Please refer to page 3-4 of the Reply Brief regarding Applicant's arguments with respect to Group IV. As pointed out therein, it is completely improper to find that the combination of modifying Kraslavsky et al. and Cohn et al. provide both a teaching in which an Internet electronic mail message is transmitted, and also under specific circumstances which are recited in the claims, a connection mode message is transmitted.

Consequently, the reversal of each of the outstanding rejections is respectfully requested.

Contrary to the Examiner's hindsight assertion, one of ordinary skill in the art would not have any motivation to modify the primary reference of Kraslavsky et al to operate using Internet electronic mail as disclosed in the secondary reference to Cohn et al.

In view of the foregoing comments, it is respectfully submitted that the invention defined by Claims 10, 12-19, 36, 38-44, and 52-61 is patentable, and a swift and favorable reconsideration of this application is therefore requested.

Respectfully submitted,

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